

# BACKGROUND

Articles on the ever-increasing number of people who are overweight or obese are in the news every day, raising awareness of the negative health consequences associated with these conditions. Obesity is a risk factor for over 30 chronic diseases including arthritis, cardiovascular disease, dyslipidemia, Type 2 Diabetes, hypertension, stroke and some types of cancers. In addition to being a risk factor for multiple chronic diseases, obesity is linked to a lower quality of life and a shorter lifespan. Gall bladder disease, sleep apnea, respiratory impairment, diminished mobility and social stigmatization are also associated with obesity.

The measurement of overweight and obesity most commonly used is Body Mass Index (BMI). BMI describes a relationship between height and weight, derived by dividing an individual's weight in kilograms by the square of their height in meters (kg/m<sup>2</sup>). Although BMI correlates to the amount of body fat in most individuals, it is not a direct measurement of body fat. For some individuals, such as athletes, BMI may identify them as overweight even though they do not have excess body fat. Other methods of measuring body fat and body fat distribution include skin-fold thickness, waist circumference, waist-to-hip ratio, underwater weighing, computed tomography, magnetic resonance imaging (MRI), and dual-energy X-ray absorptiometry (DEXA).

## BMI and Weight Status Categories for Adults

<u>BMI</u>	<u>Weight Status</u>
Below 18.5	Underweight
18.5 – 24.9	Normal
25.0 – 29.9	Overweight
30.0 and above	Obese

Obesity may seem like a simple problem to correct – eat less and move more. Problem solved. Unfortunately, for 65% of Oklahomans, it's not that simple. While monitoring caloric intake and increasing physical activity are key to any long term weight management program, a myriad of social, economic, and environmental factors combine to discourage those efforts.

Reducing overweight and obesity is a priority for our state and nation. Overweight and obesity are priority areas in the Oklahoma State Board of Health's annual State of the State's Health Report (2003-2006), Governor Henry's Strong and Healthy Oklahoma Initiative, and the Strategic Map of the Oklahoma State Department of Health. Additionally, reducing overweight and obesity is one of the national objectives for Healthy People 2010.

The 2006 Behavioral Risk Factor Surveillance System (BRFSS) indicates the percent of Oklahomans who are either overweight or



obese is approximately 65%. Oklahoma ranks last in the nation for the percent of adults who consume the recommended amount of fruits and vegetables on a daily basis. Additionally, 41% of Oklahoma adults do not participate in adequate amounts of physical activity.

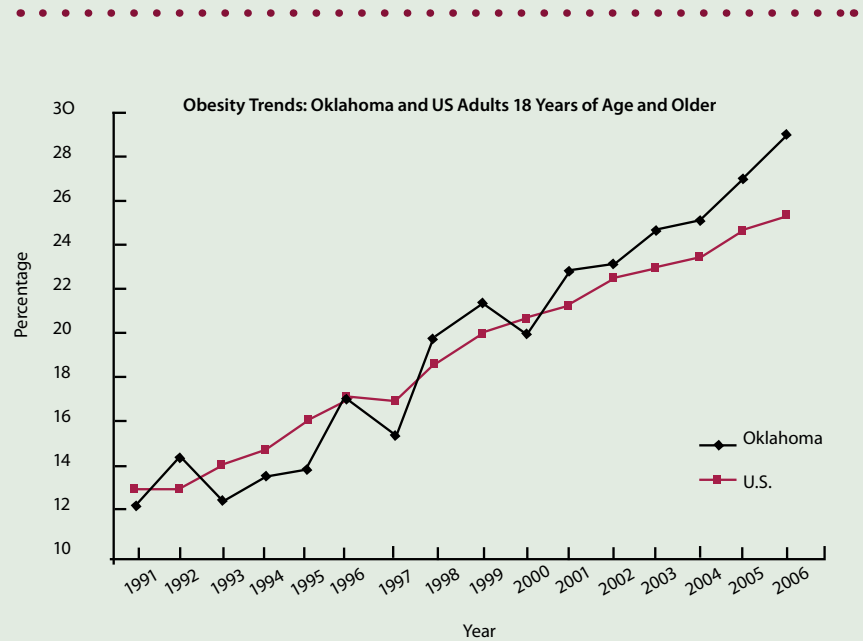
Consequently, Oklahomans experience very poor health outcomes. Our state ranks 50th in the nation for deaths due to cardiovascular disease, 47th in total mortality, 44th in deaths due to cancer, and 43rd for premature deaths. When looking specifically at deaths due to heart disease and stroke, Oklahoma exceeds the national average by significant proportions.

Obesity rates are also higher for certain population groups than others. African-Americans, Hispanics and American Indians tend to have higher rates of obesity than Caucasians or Asians, and several health conditions and chronic diseases reflect similar ethnic differences. While obesity is more common in women, overweight is more common in men. Obese persons experience higher health risks than individuals who are overweight but not obese. However, being overweight also carries risk. For young people, mild to moderate overweight increases the risk of obesity in adulthood.

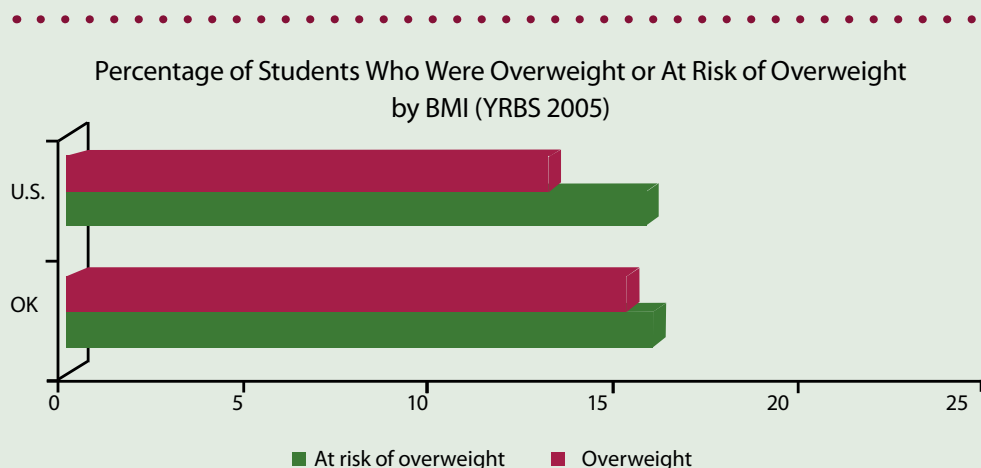
Unfortunately, Oklahoma's youth have not escaped the State's obesity problem. For children and adolescents (aged 2–19 years), the following terms are used regarding weight status:

- ✱ Healthy weight: having a BMI at or above the 5th percentile but below the 85th percentile for children of the same age and sex.
- ✱ At risk for overweight: having a BMI at or above the 85th percentile but below the 95th percentile for children of the same age and sex.
- ✱ Overweight: having a BMI at or above the 95th percentile for children of the same age and sex.

Classifications of overweight for children and adolescents are age- and sex-specific because children's body composition varies as they age and varies between boys and girls.

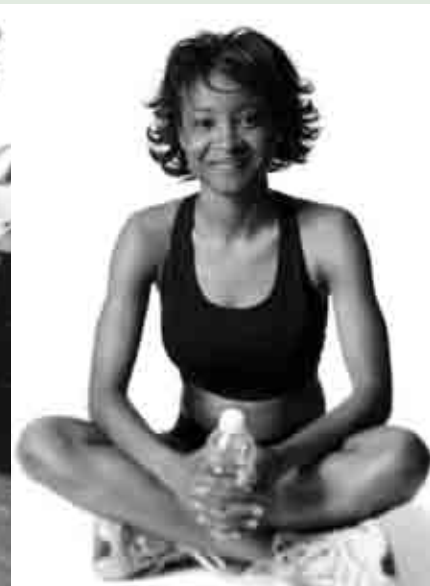


The 2005 Youth Risk Behavior Surveillance System (YRBS) estimates 15.2% of Oklahoma high school students to be overweight compared to the national average of 13.1%. This number increased from two years earlier, while the national statistics leveled off during this period. An additional 15.9% are at risk for becoming overweight.



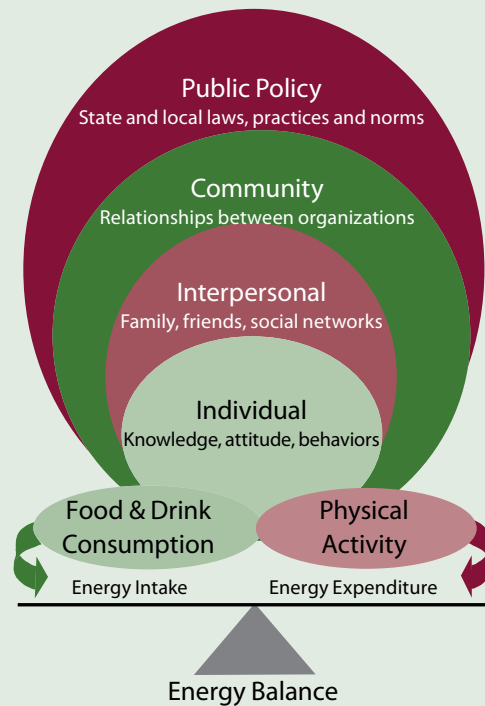
Regarding what our children are eating, Oklahoma high school students fall below the national average when it comes to eating five or more servings of fruits and vegetables per day and enrollment in physical education. They also tend to spend more time watching television than students in the rest of the nation.

The 2005 KAP survey found that health knowledge did not have as much impact on obesity status as assumed prior to the survey. For most categories, knowledge and attitudes did not significantly differ between those overweight (BMI > 25) and those not overweight (BMI < 25). However, significant differences were found in the areas of perceived cost of healthy foods, taste of healthy foods, confusion about what foods are healthy, the importance of maintaining a healthy weight, and the ability to exercise when stressed. The KAP also incorporated a one-day food log in the study. General observations of the logs revealed Oklahomans lack knowledge of portion and serving sizes. This data identifies several areas to focus education, but it also underscores the need for interventions to address all determinants of dietary intake and activity level.



# A COOPERATIVE AGREEMENT

The Physical Activity and Nutrition Program to Prevent Obesity and Other Chronic Diseases (DNAPAO) is a cooperative agreement between the Centers for Disease Control and Prevention (CDC) Division of Nutrition, Physical Activity and Obesity (DNAPAO) and the health departments of funded states. The program was established in fiscal year (FY) 1999 to prevent and control obesity and other chronic diseases by helping states develop and implement nutrition and physical activity interventions, particularly through population-based strategies such as policy-level changes, environmental supports, and the social marketing process. In 2004, the Oklahoma State Department of Health OSDH Chronic Disease Service was awarded one of these grants to build state capacity to address the issues surrounding obesity and related chronic diseases across the lifespan and to develop a strategic action plan for the state to coordinate and inform future efforts on this topic.



To have the greatest impact, it is critical that all levels of influence on health behaviors be addressed in the State Plan. The Socio-Ecological Model for Obesity Prevention incorporates all levels of influence on health behaviors and serves as the framework for the State Plan. While some influences of behavior are focused on the individual level (knowledge, attitudes and skills), the majority of influences on health behaviors surround the individual and serve to either support or undermine those behaviors.

With this in mind, a collaborative, multi-stage process was used to establish priority areas, develop objectives and identify strategies. This plan is the result of input received from well over 400 individuals and organizations across the state over a two year period.

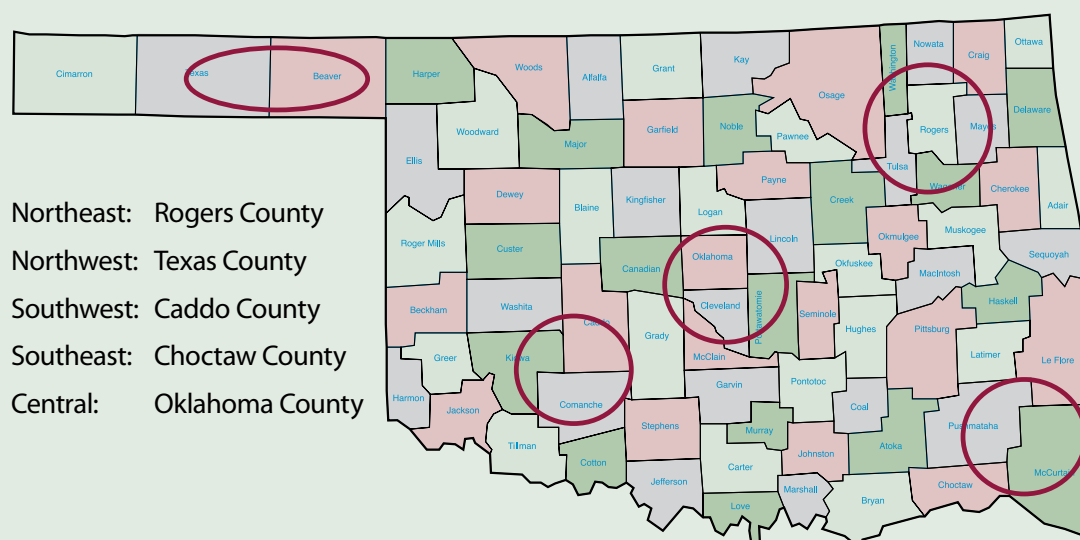
Because of their experience with policy change, expansive network and solid infrastructure, the Oklahoma Fit Kids Coalition (Fit Kids) was selected as a key partner in the development of this statewide plan. Fit Kids developed and facilitated a series of workgroups to address five priority areas: Physical Activity, Screen-Time, Breastfeeding, Calorie Control, and Fruit and Vegetable consumption. A number of the objectives and strategies included in this document are the result of their efforts.

Through the progression of the workgroup meetings, a few changes were made to these focus areas. For reduced confusion, “Calorie Control” and “Fruit and Vegetable Consumption” were combined to form “Healthy Eating.” While examining current data sources and discussing the types of data needed to track health outcomes it was recognized that some health indicators were not being captured on a regular basis, if at all. As a result “Surveillance and Evaluation” was established as an additional focus area. A number of objectives addressed improving existing measures, developing new ones and standardizing data collection and reporting efforts. Thus, the focus areas of this document included the following:

- ✱ Physical Activity
- ✱ Screen-Time
- ✱ Breastfeeding
- ✱ Healthy Eating
- ✱ Surveillance and Evaluation

In May 2006, a series of 5 Oklahoma Fit & Healthy Community Forums were held across the state to gain insight into the priorities and concerns of the general public regarding physical activity and nutrition issues impacting their communities. Over 200 individuals, representing 9 counties, participated in the process. In an effort to be consistent, the techniques used to identify community level priority areas mirrored those used to establish priorities by the OKPAN Taskforce. Meetings were organized and facilitated by Oklahoma Cooperative Extension Service County Educators with support from local Turning Point Coalitions, Fit Kids and local and state health departments. The information collected at the first meeting and feedback received at a follow-up meeting will be used in the development of community specific action plans.

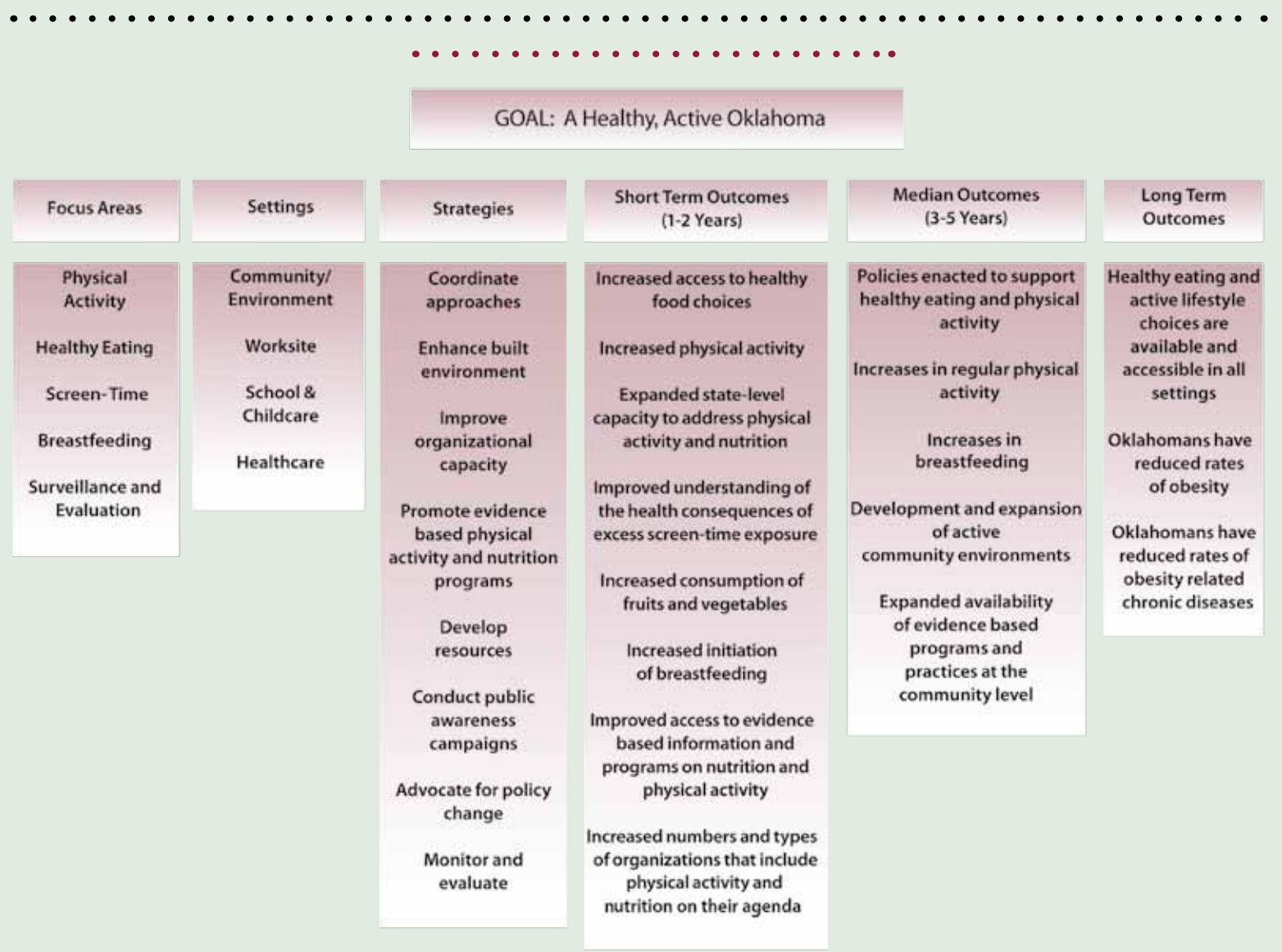
Forum Locations by County and Participant Reach



To include the youth population of Oklahoma, the University of Oklahoma’s Center for Applied Social Research hosted two-dozen discussion groups where students had the opportunity to share their opinions regarding physical activity, healthy eating, and the level of support for positive choices available at home, school and within their community. They were also asked for their suggestions regarding ways to make sure fellow students were healthy.

Participants included students from elementary, middle and high schools in both rural and urban settings and represented a cross section of Oklahoma’s racial and ethnic communities. Changing behaviors to impact obesity encompassed many complex factors. While physical activity and nutrition were the most influential, modifiable determinants of weight status, multi-faceted interventions that address environment, policy, access to healthy food, social support, goal setting, behavior modification, skill building, and self-efficacy were needed to develop supportive environments in the school and community.

Using the goal of “A Healthy, Active Oklahoma,” recommendations of the various workgroups across the state and current research on effective strategies to address the issues surrounding obesity, OKPAN developed the following model to guide both the development and implementation of the plan – along with intended short term, intermediate and long-term measures of success.



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## How to Use This Document

### STRATEGIES FOR A COMPREHENSIVE, STATEWIDE EFFORT TO CREATE A HEALTHY, ACTIVE OKLAHOMA

The purpose of the State Plan is to frame the problem of obesity in Oklahoma and provide strategies for a comprehensive, statewide effort to create a healthy, active Oklahoma. The Plan is organized into five focus areas—Physical Activity, Screen-Time, Breast-feeding, Healthy Eating, Surveillance and Evaluation. Each focus area contains current information on the topic along with a series of evidence-based strategies to impact that area. Implementing the recommended strategies will help Oklahomans Get Fit and Eat Smart, thereby reducing the rate of obesity and obesity related chronic diseases. The State Plan is a framework for partners,

organizations, and communities to endorse, adopt and enact.

Throughout the document, the reader will observe side bars demonstrating current successes of community partners. These sidebars are marked with a strawberry, tennis shoes, and nursing moms.

A complementary document addressing individual Oklahomans is the “Guide to a Strong and Healthy Oklahoma.” Strong and Healthy Oklahoma is a statewide effort to improve the health of Oklahoma residents where they live, work and learn by eating better, moving more, and being tobacco-free.



# Cross-cutting Health Objectives

## THESE OBJECTIVES ARE INFLUENCED BY MULTIPLE FOCUS AREAS

Each of the focus areas contains specific objectives that will be attained by implementation of the strategies within that focus area. However, there are several cross-cutting objectives that do not fit within one focus area because they are influenced by multiple focus areas. Because these objectives are influenced by multiple factors, they have been pulled out of the focus areas and listed below.

### Short-term Objective (1-3 years)

Slow the annual rate of increase in overweight and obesity in Oklahomans.

2004 to 2005 increase:	1.9% (BRFSS)
2005 to 2006 increase:	1.9% (BRFSS)
2008 to 2009 target increase:	<1.0% (BRFSS)

### Intermediate Objectives (3-5 years)

Stabilize the prevalence of overweight and obesity in Oklahomans.

Baseline:

Elementary age:	32.2% (2005 NSCH, 10-11 yrs old)
Middle School age:	30.2% (2005 NSCH, 12-14 yrs old)
High School age:	31.1% (2005 YRBS)
Adults:	64.8% (2006 BRFSS)

Stabilize the prevalence of morbid obesity in Oklahomans.

Baseline: 4% (2006 BRFSS)

Stabilize the proportion of Oklahoma mothers classified as overweight or obese prior to pregnancy.

Baseline: 33.3% (2006 PRAMS)





**Oklahoma Native American REACH 2010 Project is a coalition representing eight tribes/nations, one Urban Indian Health Care Resource Center and the OSDH. Successes include employee and community fitness/wellness interventions that emphasize physical activity, improved nutrition, smoking cessation and obesity prevention in nine communities. REACH 2010 programs have directly impacted over 5,000 Oklahomans and indirectly impacted thousands more through policy changes geared at controlling or preventing tobacco use, promoting employee fitness, and encouraging healthy eating.**

#### Long-term Objectives (5-10 years)

Increase the proportion of Oklahomans at a healthy weight.

Baseline:

Elementary age:	63.3% (2005 NSCH, 10-11 yrs old)
Middle School age:	64.3% (2005 NSCH, 12-14 yrs old)
High School age :	68.9% (2005 YRBS)
Adults:	35.3% (2006 BRFSS)

Target:

Elementary age:	73% (NSCH, 10-11 yrs old)
Middle School age:	74% (NSCH, 12-14 yrs old)
High School age:	79% (YRBS)
Adults:	45% (BRFSS)

Stabilize the incidence of Diabetes in Oklahomans.

Baseline:	10% (2006 BRFSS)
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Stabilize the prevalence of Obesity-related Cancers in Oklahomans.

Breast Cancer Baseline:	152 cases per 100,00 women (2004)
Kidney and Renal Cancer Baseline:	15.6 cases per 100,00 people (2004)
Colorectal Cancer Baseline:	52.1 cases per 100,000 people (2004)

Decrease the prevalence of Hypertension in Oklahomans.

Baseline:	29.8% (2005 BRFSS)
Target:	25% (BRFSS)

Decrease the prevalence of High Blood Cholesterol in Oklahomans.

Baseline:	37.8% (2005 BRFSS)
Target:	28% (BRFSS)

